IN THE CLAIMS

Claims 1-6 are pending in this application. Please amend claim 1 as follows:

1. (Currently Amended) A power supply detection circuit provided in an electric device comprising therein a power supply circuit; an operating voltage output terminal outputting an operating voltage input from the power supply circuit; and a control microcomputer, the power supply detection circuit comprising:

a first circuit provided between the operating voltage output terminal and a power fail terminal for monitoring the operating voltage of the control microcomputer, having one end connected to the operating voltage output terminal and another end connected to the power fail terminal of the control microcomputer, a first switching element controlled to be turned on and off being connected between the one end of the first circuit and the another end of the first circuit;

a second circuit comprising: a first voltage detection element inputting a voltage output from the operating voltage output terminal, and detecting whether the input voltage is an overvoltage; and a second switching element being connected between the power fail terminal and a ground, the second switching element is connected between the power fail terminal and the ground so as to be controlled to be turned on and off in accordance with detection of the overvoltage by the first voltage detection element and turning on and off of the first switching element; and

a third circuit comprising: a second voltage detection element inputting the voltage output from the operating voltage output terminal, and detecting whether the input voltage is a proper voltage or an overvoltage or a reduced voltage; and a third switching element controlled to be turned on and off in accordance with detection of the voltage by the second voltage detection element, and controlling the first switching element to be turned on and off, wherein

if a proper operating voltage is output from the operating voltage output terminal, then the second voltage detection element turns on the third switching element to thereby turn on the first switching element, and the first voltage detection element turns off the second switching element, whereby the first switching element inputs a voltage signal based on the proper operating voltage to the power fail terminal of the control microcomputer,

if the overvoltage is output from the operating voltage output terminal, then the second voltage detection element turns on the third switching element to thereby turn on the first switching element, and the first voltage detection element detects the overvoltage to thereby turn on the second switching element, whereby the power fail terminal of the control microcomputer is set at a ground potential, and

if the reduced voltage is output from the operating voltage output terminal, then the second voltage detection element fails to turn on the third switching element to thereby fail to turn on the first switching element, whereby the reduced voltage is prevented from being input to the power fail terminal.

2. (Original) The power supply detection circuit according to claim 1, wherein

the first switching element is a first transistor comprised of a PNP transistor, the second switching element is a second transistor comprised of an NPN transistor, and the third switching element is a third transistor comprised of an NPN transistor,

the first voltage detection element is a first Zener diode having a reverse withstand voltage V1 slightly higher than the proper operating voltage V0, and the second voltage detection element is a second Zener diode having a reverse withstand voltage V2 slightly lower than the proper operating voltage V0,

the first transistor is connected so that an emitter terminal is on one end side of a first circuit and so that a collector terminal is on another end side of the first circuit,

a cathode of the first Zener diode is connected to the operating voltage output terminal, a collector terminal of the second transistor is connected to the power fail terminal, an emitter terminal of the second transistor is connected to the ground, and a base terminal of the second transistor is connected to an anode of the first Zener diode, and

a cathode of the second Zener diode is connected to the operating voltage output terminal, a base terminal of the third transistor is connected to an anode of the second Zener diode, a collector terminal of the third transistor is connected to a base terminal of the first transistor, and an emitter terminal of the third transistor is connected to the ground.

3. (Previously Presented) The power supply detection circuit according to claim 1, comprising a constant voltage maintaining circuit, provided on the another end of the

first circuit connected to the power fail terminal, for setting the voltage input to the power fail terminal to be equal to or lower than a constant voltage.

4. (Original) The power supply detection circuit according to claim 3, wherein

the constant voltage maintaining circuit comprises a third Zener diode having a reverse withstand voltage V3 slightly higher than the voltage corresponding to the proper operating voltage V0, having a cathode connected to another end of the first circuit and an anode connected to the ground, and

if the voltage exceeding the voltage V3 is applied to the third Zener diode in a reverse direction, the third Zener diode, a resistance connected to the first circuit in series, and a resistance connected to the third Zener diode in parallel maintain the another end of the first circuit at the voltage V3.

5. (Previously Presented) The power supply detection circuit according to claim 2, comprising a constant voltage maintaining circuit, provided on the another end of the first circuit connected to the power fail terminal, for setting the voltage input to the power fail terminal to be equal to or lower than a constant voltage.

6. (Previously Presented) The power supply detection circuit according to claim 5, wherein

the constant voltage maintaining circuit comprises a third Zener diode having a reverse withstand voltage V3 slightly higher than the voltage corresponding to the proper operating voltage V0, having a cathode connected to another end of the first circuit and an anode connected to the ground, and

if the voltage exceeding the voltage V3 is applied to the third Zener diode in a reverse direction, the third Zener diode, a resistance connected to the first circuit in series, and a resistance connected to the third Zener diode in parallel maintain the another end of the first circuit at the voltage V3.